

MONTHLY WEATHER REVIEW.

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The MONTHLY WEATHER REVIEW summarizes the current manuscript data received from about 3,500 land stations in the United States and about 1,250 ocean vessels; it also gives the general results of the study of daily weather maps based on telegrams or cablegrams from about 200 North American and 40 European, Asiatic, and oceanic stations.

The hearty interest shown by all observers and correspondents is gratefully recognized.

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As far as practicable the time of the seventy-fifth meridian is used in the text of the MONTHLY WEATHER REVIEW.

Barometric pressures, both at land stations and on ocean vessels, whether station pressures or sea-level pressures, are reduced, or assumed to be reduced, to standard gravity, as well as corrected for all instrumental peculiarities, so that they express pressure in the standard international system of measures, namely, by the height of an equivalent column of mercury at 32° Fahrenheit, under the standard force, i. e., apparent gravity at sea level and latitude 45°.

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

September opened with low barometric pressure and severe gales over the British Isles and the northwestern coasts of continental Europe. Over the Atlantic and Pacific oceans pressure was near the normal. An extensive area of high barometer covered western interior portions of the North American Continent, and a storm area was central near the middle Atlantic coast of the United States. The barometer had risen to 30.18 inches at Vladivostok and pressure was decreasing over the interior of Siberia.

During the first decade of the month there was a gradual tho well-marked change from summer to fall types of atmospheric pressure over the great Asiatic continental area. In the United States barometric movements were as a whole abnormally slow, and resulted in a period of stagnated dry weather over middle and northern districts east of the Rocky Mountains during which forest fires caused considerable damage in localities in the North-Central States, and a serious shortage of water was experienced in many sections.

From the 1st to 3d the Atlantic coast storm moved rapidly northeastward to the Canadian Maritime Provinces, and during the succeeding five days apparently crossed the Atlantic in the middle latitudes. From the 2d to 4th the interior American high area moved south of east to the middle Atlantic coast attended by a marked fall in temperature and light frost in the upper Lake region, in mountain districts and in lowlands of the Middle Atlantic and New England States. During the 5th and 6th a shallow barometric depression attended by heavy rains moved rapidly from the Gulf States along the Atlantic coast.

On the morning of the 9th there was evidence of a storm formation near the Leeward Islands of the Lesser Antilles, and during the afternoon and night of that date the center of the disturbance past on a northwesterly course near and to the eastward of Porto Rico. By the morning of the 10th the storm-center had advanced to a position north of Porto Rico, and by the morning of the 11th had past to the westward of Turk's Island, where wind velocities estimated at 80 miles,

or more, an hour caused destruction of life and property. Continuing a north-of-west course during the 12th and 13th. the center of the storm recurved northward during the 14th and past to the eastward of Nassau, Bahamas. From this region the disturbance moved northeastward between Bermuda and the American coast during the 15th and 16th, past south of the Canadian Maritime Provinces during the 17th, and disappeared over the Atlantic east of Newfoundland after the 18th, after which it apparently merged into an extensive area of low barometer that extended southward from Iceland.

Beginning the morning of the 10th advices regarding this storm were telegraphed daily until the 15th to Atlantic and Gulf ports. The advices of the 10th stated it would be dangerous for vessels during the next few days in the subtropical region of the Atlantic off the south Atlantic coast of the United States, north of the West Indies, and thence to the longitude of Bermuda. In view of a possible recurve of the storm somewhat farther to the westward than the longitude in which the turn to the northward was actually made, advices urged precautionary measures along the coasts of the Florida Peninsula. The exceptional severity of the storm during its westward passage over the Bahamas and attending its subsequent northeasterly course over the Atlantic is shown by reports of vessels that were caught within its vortex.

A remarkable period of dry weather over the northern half of the United States east of the Rocky Mountains set in during the latter portion of August and continued well into the third decade of September. In two or three instances during this period indications that as a rule presage rain partially or wholly failed. The rather remote causes of the dry spell are now recognized. It was not possible to detect and interpret them with previous imperfect knowledge of the operative influence of the greater barometric areas. On September 22d the following forecast based upon radical changes in pressure was issued:

A barometric disturbance will cross the country from about the 24th to 28th, attended by rains that will set in over the central valleys about